

TerranearPMC Safety Share

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Week of April 22 2019 – Measles – They’re Back

Making the news is the recent outbreak of measles. Measles is a highly contagious disease caused by a virus that is spread through the air by breathing, coughing, or sneezing. Symptoms of measles are rash, high fever, cough, runny nose, and red, watery eyes. Some people who become sick with measles also get an ear infection, diarrhea, or a serious lung infection, such as pneumonia. Although severe cases are rare, measles can cause swelling of the brain and even death. Measles can be especially severe in infants and in people who are malnourished or who have weakened immune systems (such as from HIV infection or cancer or from certain drugs or therapies).

Although history has no record of the first case of measles, we do know that in the 9th century, a Persian doctor published one of the first written accounts of measles disease. And it was in 1757 when a Scottish physician demonstrated that measles is caused by an infectious agent in the blood of patients. In 1912, measles became a nationally notifiable disease in the United States, requiring U.S. healthcare providers and laboratories to report all diagnosed cases. In the first decade of reporting, an average of 6,000 measles-related deaths were reported each year. And prior to the advent of the vaccine in 1963, nearly all children got measles by the time they were 15 years of age. It has been estimated that 3 to 4 million people in the United States were infected each year. Among reported cases, annually, an estimated 400 to 500 people died, 48,000 were hospitalized, and 1,000 suffered encephalitis (swelling of the brain) from measles.

In 1978, the Centers for Disease Control and Prevention (CDC) set a goal to eliminate measles from the United States by 1982. Although this goal was not met, widespread use of measles vaccine drastically reduced the disease rates. By 1981, the number of reported measles cases was 80% less compared with the previous year. And in 2000, the United States declared that measles had been eliminated.

And today, the CDC has recognized that we are now in the midst of a measles outbreak. Health officials haven't released much information about the first person who contradicted measles (aka patient zero) only that this recent outbreak started in Washington State and seems to have originated from someone outside the U.S. who exposed a group of kids to the virus. According to medical officials, what followed was a rapid transfer of the disease to all those kids who were not immunized. These children, in turn, went to public places, like Ikea and Costco and sporting events. This resulted in the infection of anyone in the population that was not immunized. The Washington State Department of Health confirmed that the strain circulating matches one from Europe. That's to be expected, since the measles virus is no longer endemic to the U.S., meaning it has no permanent home here. It gets brought in from outside, either by people traveling to the U.S. or residents of this country going abroad and bringing it home and can then circulate within pockets of unvaccinated people.

It has been reported that one of the families involved in the Washington outbreak had recently traveled to Vietnam and may have picked up the virus there. The father said none of his three kids had gotten their MMR vaccines because when they were little he and his wife were concerned about the link to autism: a claim that was completely debunked many years ago. His children have been vaccinated against other diseases since then, but not against measles, so his children may have brought the virus back from vacation.



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It's a similar situation with the outbreak occurring in Brooklyn, New York, where a child caught measles in Israel and has now spread it to other unvaccinated people in the Orthodox Jewish community there.

The reason why the US is experiencing a measles outbreak is because we've allowed vaccination rates to slip backward. Though the nationwide vaccination rate is 91.9 percent, there are pockets where the rates dip below that, especially in young children who are most vulnerable to the virus. These pockets allow measles to spread and potentially to jump out into the broader population, exposing people who can't get the MMR vaccine for medical reasons. Though Washington state legislators just passed a bill banning personal and philosophical exemptions, lawmakers in Arizona are doing precisely the opposite: they've introduced multiple bills that would make it even easier to avoid vaccinations. According to CNN, at least 19 other states have tried to introduce similar bills, though that doesn't necessarily mean that they'll pass.

The fact is almost everyone who has not had the MMR shot will get measles if they are exposed to the measles virus. Infected people can spread measles to others from four days before through four days after the telltale symptomatic rash that is associated with measles appears. Differing from such diseases as Avian Flu or Tuberculosis, measles is a disease of humans such that the measles virus is not spread by any other animal species (aka zoonoses). Measles spreads when a person infected with the measles virus breathes, coughs, or sneezes. It is very contagious and can be transferred from an infected person even before they have a measles rash.

It seems to be apparent that the current measles outbreak is due to people visiting other countries where the disease has not yet been controlled or from persons (from these same countries) visiting the US. While getting immunized is the single most important preventative measure, it seems that traveling outside the country can lead to uncontrolled measles cases. There, travelers need to take certain precautions to prevent measles from entering the US.

- Make sure you are fully vaccinated or otherwise protected against measles.
- Infants 6-11 months of age should have 1 dose of measles vaccine if traveling internationally.
- Children in the United States routinely receive measles vaccination at 12-15 months of age.
- Infants vaccinated before 12 months of age should be revaccinated on or after the first birthday with 2 doses, separated by at least 28 days.
- Children 12 months of age or older should have 2 doses, separated by at least 28 days.
- Adolescents and adults who have not had measles or have not been vaccinated should get 2 doses, separated by at least 28 days.
- Two doses of MMR (measles, mumps, and rubella) vaccine are nearly 100% effective at preventing measles.
- The only measles vaccines available in the United States are the measles-mumps-rubella (MMR) and the measles-mumps-rubella-varicella (MMRV) vaccines. MMR has been used safely and effectively since the 1970s. A few people experience mild, temporary, adverse reactions, such as joint pain, from the vaccine, but serious side effects are extremely rare. There is no link between MMR and autism.

Hope lies in dreams, in imagination, and in the courage of those who dare to make dreams into reality - Jonas Salk

